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**MINERALOGICAL AND GEOCHEMICAL CHARACTERISTICS OF
HIGH-MAGNESIAN BASALTS OF GORELY VOLCANO (SOUTHERN
KAMCHATKA): IMPLICATION FOR MANTLE SOURCE**

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Gorely volcano, in southern Kamchatka, is a large, long-lived shield-type volcano that is currently in an eruptive phase. Prior eruptions occurred in 1980 and 1984. It is comprised of three main structural units: ancient edifice called Pra-Gorely volcano; thick ignimbrite complex, associated with a caldera forming eruption; modern edifice named 'Young Gorely'. Gorely volcano is represented by a suite of compositions ranging from basalt to rhyolite (calc-alkaline series). Within this series, high-Mg basalts were discovered. It should be emphasized that the high-magnesian basalts of the first record of the Gorely volcano clearly shows that the eruptive centers of Southern Kamchatka have mantle inception, as well as volcanoes in Central Kamchatka. An integrated mineralogical-geochemical study have been conducted on Hi-Mg basalts of Gorely volcano. We suggest fractionation of an upper mantle peridotite as a common means to produce volcanic series as a result of which the evolution of all Gorely volcano rocks was generated.

[1031] GEOCHEMISTRY / Subduction zone processes

[1036] GEOCHEMISTRY / Magma chamber processes

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